

IN THE CLAIMS:

1. (Currently Amended) An exposure method comprising the steps of:
 - a) removing an unwanted deposited film from ~~[[the]]~~ a surface of a photomask in a first region inside a vacuum chamber, a desired pattern having been formed in the photomask; and
 - b) exposing a resist film to extreme ultraviolet radiation through ~~a demagnification optical system and~~ the photomask, from which the deposited film has been removed in a second region, which is different from the first region, inside the vacuum chamber, thereby transferring the desired pattern onto the resist film;
~~wherein the step of removing the deposited film from the photomask is performed at a location away from the demagnification optical system.~~
2. (Original) The method of Claim 1, wherein the step a) comprises removing the deposited film using oxygen plasma.
3. (Currently Amended) An exposure method comprising the steps of:
 - a) loading a substrate, on which a resist film has been formed, into a vacuum chamber;
 - b) removing an unwanted deposited film from the surface of a photomask in a first region inside the vacuum chamber having a desired pattern therein inside the vacuum chamber by using oxygen plasma that has been generated in the chamber; and
 - c) in a second region, which is different from the first region, inside the vacuum chamber, exposing the resist film to extreme ultraviolet radiation through ~~a demagnification optical system and~~ the photomask, from which the deposited film has been removed, ~~thereby transferring the desired pattern onto the resist film;~~
~~wherein the step of removing the deposited film from the photomask is performed at a location away from the demagnification optical system.~~
4. (Currently Amended) An exposure method comprising the steps of:
 - a) removing an unwanted deposited film from ~~[[the]]~~ a surface of a photomask

having a desired pattern therein inside a first vacuum chamber by using oxygen plasma that has been generated in the first vacuum chamber;

b) loading a substrate, on which a resist film has been formed, into a second vacuum chamber;

c) transporting the photomask, from which the deposited film has been removed, in line from inside the first vacuum chamber to inside the second vacuum chamber; and

d) exposing the resist film to extreme ultraviolet radiation through the photomask inside the second vacuum chamber, thereby transferring the desired pattern onto the resist film.

5. (Withdrawn) An exposure apparatus comprising:

a vacuum chamber;

a substrate holder placed inside the vacuum chamber to hold a substrate thereon, a resist film having been formed on the surface of the substrate;

an optical system disposed inside the vacuum chamber and used for exposing the resist film to extreme ultraviolet radiation through a photomask, in which a desired pattern has been formed, and thereby transferring the pattern from the photomask onto the resist film;

means for introducing oxygen gas into the vacuum chamber; and

means for generating a plasma out of the oxygen gas that has been introduced into the vacuum chamber.

6. (Withdrawn) An exposure apparatus comprising:

a first vacuum chamber;

means for introducing oxygen gas into the first vacuum chamber;

means for generating a plasma out of the oxygen gas that has been introduced into the first vacuum chamber;

a second vacuum chamber;

a substrate holder placed inside the second vacuum chamber to hold a substrate thereon, a resist film having been formed on the surface of the substrate;

an optical system disposed inside the second vacuum chamber and used for exposing the resist film to extreme ultraviolet radiation through a photomask, in which a desired pattern has

been formed, and thereby transferring the pattern from the photomask onto the resist film; and
means for transporting the photomask associated with the optical system in line from inside the first chamber to inside the second chamber or vice versa.

7. (Cancelled).

8. (Currently Amended) The method of Claim 3, wherein the step of exposing the resist film to extreme ultraviolet radiation is performed after the photomask is moved from the ~~location away from the demagnification optical system to the locality of the demagnification optical system~~ first region.

9. (New) The method of Claim 1, wherein the first region has a plasma gas inlet.